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Report No. 11525

PROJECT COMPLETION REPORT

KOREA

**HOUSING FINANCE SECTOR PROJECT
(LOAN 2853-KO)**

JANUARY 11, 1993

**Infrastructure Operations Division
Country Department I
East Asia and Pacific Regional Office**

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CURRENCY EQUIVALENTS

Currency Unit	=	Won (W)
US\$1.00	=	W 806 (January 1, 1987)
	=	W 740 (1987 average)
	=	W 740 (1988 average)

WEIGHTS AND MEASURES

1 meter (m)	=	3.28 feet
1 square meter (sq.m)	=	10.8 square feet
1 pyong (py)	=	3.3 square meters
1 hectare (ha)	=	10,000 sq.m or 2.471 acres or 3,024 pyong

ABBREVIATIONS AND ACRONYMS

DFC	=	Development Finance Company
HFS	=	Housing Finance System
KHB	=	Korea Housing Bank
KLDC	=	Korea Land Development Corporation
KNHC	=	Korea National Housing Corporation
KRIHS	=	Korea Research Institute for Human Settlements
LTV	=	Loan-to-Value
NHF	=	National Housing Fund

FISCAL YEAR

January 1 to December 31

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THE WORLD BANK
Washington, D.C. 20433
U.S.A.

Office of Director-General
Operations Evaluation

January 11, 1993

MEMORANDUM TO THE EXECUTIVE DIRECTORS AND THE PRESIDENT

SUBJECT: Project Completion Report on Korea
Housing Finance Sector Project (Loan 2853-KO)

Attached is a copy of the report entitled "Project Completion Report on Korea - Housing Finance Sector Project (Loan 2853-KO)" prepared by the East Asia and Pacific Regional Office. Part II was not submitted by the Borrower. The Completion Report provides an informative and comprehensive account of Project achievements.

While this project met most of its investment goals and nearly all the institutional and policy goals, the latter were exceedingly modest. The progress in targeting the housing subsidies towards the low-income segment of the market was limited. The impact in the financial area was small because reforms in other areas were not part of the package. Overall, the project is rated as satisfactory. The very restrictive land and housing market regulations cast, however, doubts whether this project approach provides an effective and sustainable way to reach sector objectives.

In future operations, care should be taken to design broader sector reforms and optimize their sequencing.

The project is being audited together with the Pusan Urban Management Project (Loan 2801-KO).

Attachment



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PROJECT COMPLETION REPORT

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PROJECT COMPLETION REPORT

KOREA

HOUSING FINANCE SECTOR PROJECT (LOAN 2853-KO)

PREFACE

This is the Project Completion Report (PCR) for the Korea Housing Finance Sector Project, for which Loan 2853-KO in the amount of US\$150 million was approved on June 23, 1987. The last disbursement was made on November 22, 1989 and the loan closed earlier than the scheduled closing date of June 30, 1991.

The PCR was prepared by the Infrastructure Operations Division of the East Asia and Pacific Regional Office (Preface, Evaluation Summary, Parts I and III). The Borrower did not provide Part II.

Preparation of this PCR was started during the appraisal of the Housing Project (Loan 3329-KO) in December 1990 and was based, inter alia, on the Staff Appraisal Report, the Loan Agreement, supervision mission reports, correspondence between the Bank and the Borrower, and internal Bank memoranda.

PROJECT COMPLETION REPORT

KOREA

HOUSING FINANCE SECTOR PROJECT (LOAN 2853-KO)

Evaluation Summary

Introduction

i. This project was one of a series developed and implemented since 1980 to address the problems of the Korean housing sector. Bank involvement in this area began with the National Urban Land Development and Housing Loans I and II of 1981 and 1982 which supported the activities of government land development and housing production agencies. A later evaluation of the projects found that while they had met their physical goals, they had set and met only limited goals for orienting the country's housing policy. Their impact on the housing sector was judged to be minimal. A broader sectoral focus was reflected in two subsequent loans intended to deal with the perceived "bottlenecks" in the housing sector, the Urban Land Development Project of 1986 (Loan 2704-KO) and the Housing Finance Sector Project of 1987 (Loan 2853-KO). However, while earlier projects were mainly concerned with institutional strengthening of major public agencies and financing investment in housing or land development, the Housing Finance Sector loan sought to address issues in the government's general housing policy as they related to housing finance. Thus, it functions as a bridge between earlier projects and the recently approved Housing Sector Loan, which addresses housing policy as a whole.

Objectives

ii. The basic objective of the project was to increase the role of credit in the Korean housing sector. This objective was to be pursued through two components. The first was a traditional investment component which would partially finance an expansion of the National Housing Fund's (NHF) lending program. The second was a policy action statement and program of activities for NHF and the Korea Housing Bank (KHB) designed to address the problems identified in a Housing Finance Sector Study. Loan funds would finance studies and consultant services in pursuit of this goal. Thus, while the project was officially an investment project designed to finance the construction of low-income housing it also sought to have a sector-wide impact through reforms in the housing finance sector.

iii. Investment Component. Direct financing would be provided for a two-year time slice (mid 1987 through mid-1989) of NHF lending.^{1/} Bank funds would finance sub-loans to eligible borrowers (government institutions, local governments, and private contractors) for construction finance to be converted into long-term mortgages for about 210,000 owner-occupied and rental units. The total estimated cost of this activity was Won 1,240.6 billion (US\$ 1,442.5 million as of January 1987). By the end of 1988, NHF's loan portfolio was projected to reach W3,726.7 billion, an increase of 20% over the balance at the end of 1986.

^{1/} However, the disbursement profile conformed to DFC experience in the country at that time.

iv. Policy Component. However, the broader objective of the project was to achieve the policy objectives described above. The project sought to change housing finance policy in two areas. The first was reform of the policies of NHF to increase provision of owner occupied low-income housing and rental housing and to improve subsidy targeting. The second policy goal was expansion of the market-based housing finance for middle and upper income groups from KHB or private institutions.

Implementation Experience

v. Investment Component. NHF's lending program increased substantially during the course of the project. As of the end of 1988, total lending had reached W3,806 billion, an increase of 35% over the balance at the end of 1986, though less than the 43% increase projected at appraisal. In the years immediately following project implementation, lending expanded rapidly and quickly exceeded the appraisal estimates. Thus, the project's investment objectives were met, although they lagged behind the original timeframe.

vi. Policy Component. In general, the specific policy targets of the project were met. NHF succeeded in decreasing the size of units financed and providing smaller units with preferential treatment. Thus, the type of unit financed by NHF became more affordable to low-income households. Funds allocated for construction of commercial rental units were increased and the terms for such loans were made more attractive. KHB expanded its operations almost fourfold between 1986 and 1990. The major studies of methods for expanding the market-based housing finance system were completed on a timely basis and a housing policy seminar was held in 1988.

Results

vii. Despite the fact that nearly all the investment and policy goals of the project were met, impact on the housing sector was minimal. The government housing finance system made modest progress in partitioning the market into low and middle income components and targeting subsidies towards the former. However, the primary achievement was a decrease in the size of the unit financed rather than a decrease in the income of the borrower.

viii. The gradual pace of financial sector reform and the exclusion of the housing finance system from it limited the impact of the reforms achieved under the project. Controls on the interest rates charged on housing finance loans inhibited the use of market-priced deposits to fund housing portfolios. Thus, government housing finance programs continued to be highly dependent on contractual and obligatory savings schemes. Private financial institutions expanded their housing portfolios, but not sufficiently to increase their market share. Thus, the sector continues to be dominated by government directed-credit institutions. Moreover, the fact that NHF borrowers continued to borrow amounts below their payment capacity is indicative of the type of credit rationing associated with repressed financial systems.

ix. Efforts to promote commercial rental housing were also impeded by regulatory factors. While the amount of financing available for rental units increased and the terms were made more attractive, regulation of rental housing deterred the private sector from making use of the increased funding. In particular, rent control on NHF-financed units and tax treatment of rental housing income discouraged construction of commercial multi-unit rental housing.

The number of rental units did increase, but only because of increased construction of publicly-owned rental housing.

x. In general, regulation of the housing sector impeded completion of the project's objectives. Increasing the provision of housing finance exerts its effects on the housing market primarily by increasing the effective demand for housing. However, severe constraints on supply through restrictive housing sector policies (designed to reduce speculation) have limited the ability of the private sector to respond to demand. It will be of little use to expand the supply of housing finance if the supply of housing is constrained and cannot respond.

xi. Some of constraints in the supply of housing were met by the large expansion of government housing construction, which was supported by the Bank's Urban Land Project. Government efforts to expand the supply of housing had begun to show results by the end of the 1980s. However, estimates show that the housing sector still suffers from excess demand and annual production is still far less than the 1 million units needed to meet existing and future demand.^{2/} Apparently, neither the threefold increase in the supply of housing finance nor the rapid expansion in government land development activities^{3/} were sufficient solutions to the problems of the sector, although they did relieve some of the pressure.

xii. A long-term solution can only come through broadening housing policy reform to those factors which restrict the supply of housing. While this project did not directly address these factors, it did contribute to the subsequent development of a Housing Sector Loan (Loan 3329-KO) with a broader policy framework.

Sustainability

xiii. Evaluating the probability that the benefits of the project will continue must again reflect its dual nature as both an investment and a policy program. In the most narrow sense, the project's investment component is highly sustainable. The institution in question, NHF, is very strong financially and likely to continue to be a major source of housing finance. However, the sustainability of the improvements seen in housing sector conditions observed by the 1980s is less clear. These improvements were achieved with a massive government construction program. It is unlikely that the government can maintain this level of investment for a sufficient period to improve sector conditions substantially. Thus, the general approach of Korean housing sector policy may not be sustainable; a "sustainable" approach would rely on sectoral reforms which would allow housing supply to adjust to demand. Nonetheless, the willingness of local officials to meet the targets set forth in this loan suggests a growing recognition of the need for housing and financial sector reform. This result bodes well for the more ambitious program of housing reform set forth in Loan 3329-KO and the financial sector reform program contemplated under the proposed financial sector adjustment loan.

^{2/} See "Korea: Housing Project," Staff Appraisal Report, 1991.

^{3/} See Project Completion Report, Urban Land Development Project.

Findings and Lessons Learned

xiv. Design of sector project: Care should be taken not to define the "sector" so narrowly that although all policy objectives are met, the impact on the sector is minimal. In this case, the project's impact was limited by the pace and coverage of financial sector liberalization. While significant liberalization did occur in the financial sector, it did not extend to the issues (interest rate term structure, etc.) most vital to the housing finance system. Thus, housing finance operations should always, to the extent possible, include representatives of the Ministry of Finance among the official "clients" and coordinate activities with Bank financial sector operations. In general, projects with a sectoral or policy focus should monitor policies in other relevant sectors.

xv. Sequencing in Policy Reform Programs: Sectoral reform programs must examine not only the types of reform necessary in the economy, but also their order. In this case, attempting to expand the housing finance system without complementary reform of the policies effecting housing supply limited the success of the project. The importance of sequencing was particularly evident in the efforts to promote private commercial rental housing through expanded finance, which were almost totally unsuccessful in the absence of regulatory reform. Thus, the lack of accompanying reforms of regulations effecting the supply of housing mitigated the impact of increasing the supply of finance.^{4/}

xvi. Evaluation of Policy Reform Projects: Extreme care should be applied to the interpretation of the rates of return achieved in policy reform projects. For example, in this case, increases in housing prices elevated the rate of return on units financed by the project. Thus, a seemingly favorable result, a higher ex post rate of return, actually signified continued distortions in the housing sector. For this reason, project economic evaluations should include analysis of the factors contributing to the change in rate of return estimates and how these factors relate to the project's policy objectives.

^{4/} The subsequent Housing Sector Project, Loan 3329-KO, is addressing these regulatory issues.

PROJECT COMPLETION REPORT

KOREA

HOUSING FINANCE SECTOR PROJECT (LOAN 2853-KO)

PART I. PROJECT REVIEW FROM BANK'S PERSPECTIVE

Project Identity

- Project Name: Housing Finance Sector Project
- Loan No.: 2853-KO
- RVP Unit: East Asia and Pacific Region
- Country: Republic of Korea
- Sector: Urban
- Subsector: Housing

Introduction

1. This project was one of a series developed and implemented since 1980 to address the problems of the Korean housing sector. Bank involvement in this area began with the National Urban Land Development and Housing Loans I and II of 1981 and 1982 which supported the activities of Government land development and housing production agencies. A later evaluation of the projects found that while they had met their physical goals, they had set and had met only limited goals for orienting the country's housing policy. Their impact on the housing sector was judged to be minimal. A broader sectoral focus was reflected in two subsequent loans intended to deal with the perceived "bottlenecks" in the housing sector, the Urban Land Development Project of 1986 (Loan 2704-KO) and the Housing Finance Sector Project of 1987 (Loan 2853-KO). However, while earlier projects were mainly concerned with institutional strengthening of major public agencies and financing investment in housing or land development, the Housing Finance Sector loan sought to address issues in the Government's general housing policy as they related to housing finance. Thus, it functions as a bridge between earlier projects and the recently approved Housing Sector Loan, which addresses housing policy as a whole.

2. For this reason, evaluation of the success or failure of this project must be expanded to issues beyond the traditional analysis of Bank investment projects. By such criteria--disbursement, compliance with covenants, institutional sustainability, economic rates of return--the project was successful. However, its sector focus requires an evaluation based on broader criteria measuring the ultimate impact on the housing finance system and the housing sector. Such an evaluation provides two valuable lessons for future sectoral operations: 1) the importance and proper sequencing of housing sector policies to the success of housing finance operations and 2) the importance of addressing housing finance reform within the context of financial sector reform.

Project Background

3. The Housing Sector and the Development of Korean Housing Policy. The portfolio of housing projects cited above is a reflection of the evolution of the Government of Korea's housing policy and the Bank's role in it. Korean housing policy has evolved from neglect of the sector through the early 1970s to an emphasis on direct provision of housing. By the early 1980s Government policy had shifted to direct provision of important "inputs" in the construction of housing, namely, serviced land and long-term finance. The Urban Land and Housing Finance projects were intended to contribute to this effort. Only recently has the integral role of policy in the housing sector been given direct attention in both the Government's and the Bank's strategy for addressing housing sector problems.

4. Korean development policy has always entailed a high degree of direct intervention in the economy. During the 1950s and 1960s, economic growth was financed by steering resources to export industries through directed credit programs and other mechanisms. After a period of rebuilding war damages during the 1950s, housing was largely neglected until the 1970s.

5. At that time, the consequences of years of neglect of the housing sector began to be seen. Economic growth was accompanied by a rapid rate of urbanization; the urban population grew at an average annual rate of 5.4% from 1960-88, a rate nearly three times that of the total population. By 1988, the nation was over three quarters urban. However, low investment in urban housing led to rapid increases in crowding and housing prices. As a response, a housing policy was formulated in a ten year housing plan and specific sectoral goals were set in economic planning.

6. These goals were pursued through a large degree of direct Government intervention in the production of housing and its major inputs. Several major institutions were created to finance housing (the Korea Housing Bank, KHB), to develop serviced land (the Korea Land Development Corporation, KLDC) and to build and finance low income housing (the Korea National Housing Corporation, KNHC, and the National Housing Fund, NHF). Under the Third Five Year Economic and Social Development Plan (1972-76), 30% of new housing was created by both national and local public agencies. In the late 1970s, an effort to "cool" the housing sector restricted private housing development, thereby giving public institutions a still more important role.

7. The Bank began discussions with the Korean Government on the possibility of a housing loan in the late 1970s. By the early 1980s, two loans financing land development activities of KLDC and housing construction and mortgage lending through KNHC and NHF (Loans 1980-KO and 2216-KO) had been approved. Both loans attempted both to improve the operations of the two institutions and to demonstrate through the Bank-financed portion of their programs the feasibility of lower plot size and building standards. Later evaluation of these projects

found that while they were largely successful in meeting these goals, they had little ultimate impact on the housing sector.^{1/}

8. Despite the increased emphasis on improving conditions, the Korean housing sector still displayed signs of a large level of excess demand. By 1985 the Korean housing price index had reached a level almost eight times its 1974 level while an index of both construction material and general consumer prices grew at only half that rate. Thus, housing costs grew at an average annual rate of approximately 20%--a real rate of increase of 6.53% per year. Evidence suggests that these trends had a significant impact on affordability despite wage increases during the same years. The ratio of single family house prices to incomes, a common measure of housing affordability, doubled during the 1970s from 2.31 in 1976 to 5.64 in 1980. Despite a decline in the early 1980s the ratio remained high at 4.66. Preliminary research suggests that this problems may have been even more acute among low-income households.^{2/}

9. By the mid 1980s, the Government had launched a major program to increase the supply of housing. Two million houses were to be built during the latter part of the decade. As attempts were made to formulate a response to housing sector problems, two factors were identified as the major constraints on housing supply: inadequate supply of serviced land and housing finance. Both public land development agencies and housing finance institutions were given ambitious goals to compete as part of this program. This project participated in that process by addressing the deficiencies in the housing finance sector while Loan 2704-KO, Urban Land Development, addressed the scarcity in the supply of serviced land.

10. The Housing Finance System. In the early 1980s, the housing finance system was supplying an inadequate level of credit to meet the demands of the rapidly growing urban population. The volume of housing loans as a percentage of GNP was only 6.9% in 1984, compared to 28% in France and the United Kingdom and 41% in the United States. While in most OECD countries between 60% and 100% of the value in new homes was covered by mortgages, in Korea only 26% of the value of housing production was financed. Moreover, while a similar percentage of total home sales (both new and used) is financed in other countries, it was estimated that only 10% of the value of all home sales was covered in Korea.

11. The housing finance sector was dominated by the two Government lenders, a specialized housing bank, The Korea Housing Bank (KHB), and a low-income housing finance institution managed by KHB, The National Housing Fund (NHF). At loan appraisal, these institutions accounted for 83% of housing credit. Other lending institutions displayed little interest in entering the housing finance market, largely due to restrictions on loan interest rates.

^{1/} See Project Completion Report, First and Second National Urban Land Development and Housing Projects, Report No. 9723, 1991.

^{2/} Kim, 1991, discusses these statistics and the affordability problem in greater detail

12. Financial Sector Reform and Housing Finance. The regulatory problems inhibiting the housing finance market were a reflection of a high level of regulation of the Korean financial system. Throughout the 1960s and 1970s, both interest rates and the allocation of credit were strictly controlled to direct funds to high-priority sectors. However, in the 1980s, a program of gradual financial sector liberalization was initiated. Preferential interest rates were removed for many programs in 1982 (although some preferential access to credit was maintained and allowable spreads for financial intermediaries were widened). Controls over deposit rates were maintained, although they were adjusted so as to remain positive in real terms. In 1984, rates on other financial assets, such as corporate bonds, were liberalized. Lending rates were allowed a narrow band so that lenders could charge differential rates according to credit quality and other factors. However, except for the 1.5% differential allowed within this band, rates were not allowed to reflect a normal term structure. In 1988, most bank and non-bank lending rates were decontrolled, but only long-term deposit rates were liberalized. The margin between the informal sector and formal sector (i.e., corporate bond) rates fell from 20% to 11-12% by 1986. By 1990, the two rates were nearly equal. However, the slow pace of this process was to have an impact on the ability of a housing finance sector operation to achieve its goals.

13. The Housing Finance Policy Agenda. A Bank-sponsored housing finance sector study^{3/} was prepared in 1984. It led to a policy seminar in 1986 and to a request for Bank financing to support modernization of the housing finance system. The study recommended that mortgage interest rates, which were still controlled in the Government-owned institutions, should be included in the general program of financial sector liberalization, thereby allowing housing finance institutions to lend at market rates and to adjust rates charged according to the conditions of the loan and, especially, its maturity. It was also recommended that other regulatory controls on mortgage finance be lifted, especially those which limited the loan to value ratio and the maturity of the loan. Financing should be made available for all types of home purchases, whether new or used.

14. The study concluded that NHF be maintained as a separate institution from KHB specializing in low-income loans. However, it was found that NHF lending policies led to a portfolio almost identical to that of KHB in terms of size of units financed and the recipients of loans from the two institutions were also likely to be quite similar. To ensure better targeting of NHF loans, recipient incomes should be verified rather than using house size as an implicit screening mechanism and the minimum house size should be reduced. Again, financing should be available for new or used units and higher loan to value ratios should be allowed. Funding should also be provided for units produced by private sector as well as public sector developers. Funds should also be made available for rental housing construction. Many of these conclusions were incorporated in the policy objectives of the Housing Finance Project.

^{3/} "Korea: Housing Finance System," Report No. 5807-KO, June 27, 1986

Project Objectives and Description

15. The basic objective of the project was to increase the role of credit in the Korean housing sector. This objective was to be pursued through two components. The first was a traditional investment component which would partially finance an expansion of NHF's lending program. The second was a policy action statement and program of activities designed to address the problems identified in the Housing Finance Sector Study. Loan funds would finance studies and consultant services in pursuit of this goal. Thus, while the project was officially an investment project designed to finance the construction of low-income housing it also sought to have a sector-wide impact on housing through reforms in the housing finance sector.

16. The Bank would supply US\$150 million in financing to support these activities. Disbursements would be sub-loans which complied with specific eligibility criteria ensuring suitability for low-income households.

Project Design and Organization

17. Investment Component. Direct financing would be provided for a two-year time slice (mid-1987 through mid-1989) of the Government's National Housing Fund program.^{4/} Bank funds would finance sub-loans to eligible borrowers (KNHC, local Governments, and private contractors) for construction finance to be converted into long-term mortgages for about 210,000 owner-occupied and rental units. The total estimated cost of this activity was Won 1,240.6 billion (US\$ 1,442.5 million as of January 1987). By the end of 1988, NHF's loan portfolio was projected to reach W3,726.7 billion, an increase of 20% over the balance at the end of 1986.

18. Policy Component. However, the broader objective of the project was to achieve the policy objectives described above. Basic strategy was stated in a Policy Statement prepared both for this project and the Sixth Economic and Social Development Plan. Specific measures to achieve these goals were laid out in a Program of Actions and Studies. Some policy goals were given explicit objectives and numerical targets to be fulfilled by specific dates. Others were stated as more general principles that should guide change, with the specific mechanisms and timing to be determined in the studies to be performed under the project and financed by the loan. US\$500,000 in financing would be provided in the loan for studies, consultant services, and training.

19. The project sought to change housing finance policy in two areas. The first was increased provision of owner occupied low-income housing through reforms in NHF lending practices and increased provision of rental housing through incentives provided in NHF's lending program. The second policy area was expansion of the market-based housing finance for middle and upper income groups from KHB or private institutions.

^{4/} However, the disbursement profile conformed to the experience of a Development Finance Company (DFC) in the country at that time.

20. Improved Targeting of Government Subsidies and Low-income Housing Programs. The 1986 Bank housing finance study found that although NHF was intended to be the low-income arm of the public housing finance program, its clientele was almost identical to that of KHB. A major goal of the project was that NHF improve its targeting of low-income households through two tactics. The first tactic was a reform of NHF's lending so as to be more appropriate for low-income households. Four policy targets were set:

- (a) Income of borrowers will be explicitly considered in selecting borrowers for smaller NHF units; only those below the urban median will qualify;
- (b) Maximum size of an eligible unit was to be reduced from 25.7 py to 18 py (84 to 59 sq. m.);
- (c) Tax concessions favoring smaller houses were to be restricted to smaller units; and
- (d) NHF would introduce measures to give buyers of smaller units preferential treatment with respect to buyers of larger units;

21. Increased Supply of Rental Housing. The second tactic for reaching low-income households was to include NHF in a general strategy to stimulate construction of rental housing. Rental housing has traditionally been considered an affordable option for low-income households, and conditions in Korea supported this position. Previous studies had found that occupants of rental units with monthly payments tended to be among the lowest income group. However, the rental housing market suffered from considerable excess demand and a near zero vacancy rate. Most rental housing was provided through subdivision of owner-occupied units. Under these conditions, the cost of gaining rental accommodation was increasing even more rapidly than that of owner-occupied housing.

22. Moreover, both housing and financial market conditions in Korea impeded access to affordable rental housing. The Korean rental market has long been dominated by the widespread use of chonsei, a rental contract in which the tenant pays for use of the unit through an up-front loan to the owner. The lack of credit for the household sector made chonsei one of the few methods available to households for borrowing funds while the tight rental market allowed landlords to dictate the payment mechanism. However, under chonsei even occupiers of rental units had to engage in substantial savings or borrowing. While such contracts are not necessarily more expensive than monthly rental payments, the cash flow problems created for low-income households restricts their ability to find affordable shelter.

23. Previously, Government programs had placed a heavy emphasis on supporting owner-occupied housing and had neglected the rental sector. Under this project, incentives would be provided for the construction of commercial rental units. Specifically, NHF would:

- (a) Increase lending for rental construction, especially to private developers;

- (b) encourage smaller rental projects by reducing the minimum project size from 10 units to 5;

In addition, rental housing construction would be supported in the general housing policy through:

- (c) preferential tax treatment for rental housing; and
- (d) A study of the current incentives designed to support the establishment of a rental industry, including the current subsidized interest rate of 5% charged by NHF.

24. Improvements to "Market-Based" Housing Finance System. While the targeting of Government-sponsored programs was being improved, the supply of market-based housing finance was to be increased for those not requiring assistance. This was to be accomplished by:

- (a) Expanding KHB's resource base through:
 - (i) increasing authorized capital from W50 billion to W300 billion by the end of 1987.
 - (ii) enlarging KHB's "scope of business activities"; and
 - (iii) increasing the autonomy of KHB's management to mobilize funds from the capital markets by permitting bond issuance without Government approval.

- (b) A Study of Fund Mobilization for the Housing finance system

This study was to explore various mechanisms for expanding resources mobilized for the housing finance system (HFS) through KHB and other institutions. These were to include better deposit mobilization and bond sales

- (c) A study of Lending programs to expand borrowers' options

A final study was to explore mechanisms which would make the HFS more adapted to borrowers needs. These mechanisms were to include higher LTV ratios, ARMs, and the removal of restrictions on financing purchases of older homes.

Project Implementation

25. Investment Component. NHF's lending program increased substantially during the course of the project. As of the end of 1988, total lending had reached W3,806 billion, an increase of 35% over the balance at the end of 1986, though less than the 43% increase projected at appraisal. In the years immediately following project implementation, lending expanded rapidly and quickly exceeded the appraisal estimates. (See Annex II.) Thus, the project's investment objectives were met, although they lagged behind the original timeframe.

26. These results were reflected in the project costs and outputs. The total number of units produced during the project was 203,000 , a slight shortfall from the 210,000 projected from 1987-88. The total project costs fell from W1249.6 billion to W949.4 billion, a drop of 30%.^{5/}

27. Policy Component. In general, the specific policy targets of the project were met. NHF succeeded in decreasing the size of units financed and providing smaller units with preferential treatment. KHB expanded its operations almost fourfold between 1986 and 1990. The development of the second stage of policies also proceeded on schedule. The major studies of the project were completed on a timely basis and a housing policy seminar was held in 1988. These changes are discussed in more detail in Section F.

28. Disbursements. Project implementation reflected the dual nature of the operation as both an investment and policy loan. However, the loan's disbursement record demonstrated a tension between these two objectives. Loan funds were to be disbursed against NHF allocations meeting a number of procurement and on-lending qualifications and the project was scheduled to fully disburse by mid-1991. Since the project was officially an investment project, disbursements were not explicitly linked to completion of the policy action plan. Sufficient qualifying sub-projects were presented to allow the loan to fully disburse by the end of 1989 despite the fact that NHF's lending program ran behind its lending goals until 1990.

29. Quick disbursement is viewed as a success in investment projects, but it may not always be conducive to policy-based lending. Eighty percent of project funds were disbursed by mid 1988. But at that point, only a portion of the Policy Action Statement had been completed. The divergence between the rate of disbursements and the completion of the action statement was not ultimately a problem; preparation for the following project allowed the policy dialogue to continue. However, in other environments it may be difficult to maintain policy discussions. Loan covenants to maintain the relationship between the rate of disbursement and the rate of policy change may be necessary in future operations to ensure that the Bank retains "a seat at the table."

Major Results of the Project

30. Government Program Targeting. Perhaps the project's greatest success was in promoting changes in NHF lending policies and underwriting standards which made financing more accessible to low-income households. The profile of NHF lending shifted significantly. In 1985, approximately half of the portfolio was used to finance housing with a floor area of greater than 60 sq.m; by 1990, the total portfolio was less than 60 sq.m. Lending for housing greater than this size was stopped during the development of the project. This shift represented a definite division in the market with KHB, two thirds of whose portfolio was devoted to housing with greater than 60 sq. m. by 1990. Thus, NHF redesigned its lending program to finance housing which would be more suitable for low-income borrowers.

^{5/} Total lending and project costs differ slightly due to the timing of disbursements.

31. The subsidy policy was also tapered so as to provide greater benefits to purchasers of smaller units. KHB lending, which is intended for larger housing units, carries an interest rate of 11.5% and an average loan-to-value (LTV) ratio of 25%. NHF loans for units in the 50-60 sq. m. range, the largest unit currently financed, have a maximum LTV of 30% and an interest rate of 10%. NHF loans for purchase of units of less than 40 sq. m. and a loan balance of up to W12 million now receive a loan with an LTV of 50% and an interest rate of 5%.

32. As a result, the average LTV in the NHF portfolio now reflects the emphasis on smaller units. The average loan-to-value ratio of the NHF portfolio was increased from 25% to 40% and the average loan size as of 1990 was W5.070 million, thereby falling in the smallest size category.

33. Nonetheless, the impact of lending for smaller units on the income level of NHF loan recipients was modest. Prior to the reforms conducted under the loan, the average income level of NHF loan recipients was the 70th percentile of the urban income distribution; the average on post-reform loans improved only slightly, falling to the 65th percentile. NHF was also more successful in differentiating the average loan size than it was in differentiating the income of its clients from those of KHB. Before the reforms, the average income of NHF loan recipients was 88% of that of KHB; after the reforms it was 82%. Thus, there was still significant overlap between the clientele of the two organizations. Apparently, making loans more accessible to lower income households was not sufficient to substantially change the income group benefiting from NHF's lending program. NHF was lending to largely the same income group as previously, though for a larger share of the price of smaller houses.

34. NHF's success in targeting subsidies to lower income households is also unclear. Both institutions, NHF and KHB, provided an interest rate subsidy to loan recipients. The rates charged by NHF (10% or 5% depending on the size of the unit) were lower than the 11.5% charged by KHB. As inflation has increased over the last five years, the rates of both institutions have declined markedly in real terms. In comparison with the market corporate bond interest rate (approximately 16.5% in 1990), the two institutions provide approximate interest rate subsidies of 6.5% (KHB) and 5% or 11.5% (NHF). However, while NHF loans carry a lower interest rate and higher LTV, KHB loans are larger. The average NHF loan in 1990 had an initial balance of W5.07 million while that of KHB was W7.306 million. Without more information on the exact breakdown of the two portfolios, it is impossible to compare the distribution of subsidies. Nonetheless, it would appear that the relatively similar income groups served by the two institutions are receiving relatively similar subsidies.

35. Thus, the Korean housing finance system made modest progress in partitioning the market into low and middle income components and targeting subsidies towards the former. However, the emphasis continues to be on house size rather than household income. The fact that similar income groups, with similar payment capacities, were willing to accept a much smaller unit with only a slightly greater subsidy suggests that credit is still sufficiently rationed to force households into borrowing less than their payment capacity.

36. Increased Support for the Rental Market in Government Housing Finance Programs. A number of measures, both within and outside NHF's operations were introduced to expand the supply of rental housing. In 1989, the interest rate charged for rental unit financing was reduced from 5% to 3% (less than a third of the rate for owner-occupied housing and 1/6th the corporate bond rate), the repayment period was extended from 15 to 20 years, and the amount of loan per dwelling was increased. NHF financed construction of 224,000 rental units between 1986-90. Lending for rental housing reached W 1,310 billion during these years, nearly five times the amount in the previous five years and one third of total lending.

37. However, these terms did not provide sufficient incentives for the expansion of the commercial, multi-unit rental market. The private sector did not respond to the availability of rental unit financing and the vast majority of new financing for construction of rental units was used by the public sector. This result was almost totally due to the heavy degree of regulation placed on rental housing. While lending terms for construction of rental units was relaxed, other housing policies continued to provide strong disincentives for the production of such units. Rent control on NHF financed units remains strict; the current allowable "fair rent" for privately-produced rental units using this financing is only 40-50% of the market rent. Moreover, differential tax treatment of monthly rental payments and chonseil contracts continues to substantially favor the latter. A study by the Korea Research Institute for Human Settlements (KRIHS) found that these disincentives have been sufficient to discourage private production of rental units even in the face of low interest rates and lenient lending terms. Thus, expanded financing and improved terms for commercial rental housing were insufficient to overcome the disincentives created by the regulatory environment.

38. Evidence also suggests that low-income groups did not benefit greatly from Government support for rental housing. Most NHF financed rental units did not fit the traditional pattern of rental tenancy but rather were what is locally referred to as "long-term rental." Tenants of such units actually took on a deferred purchase contract which allowed them to buy the unit in five years. To participate in such a program, the tenant had to also participate in a contractual savings program similar to that of traditional purchases. Almost three quarters of the rental units financed by NHF were of this type.

39. The heavy emphasis on deferred purchase as opposed to traditional rental limited the ability of the rental housing initiative to reach low-income households. Another study by KRIHS found that the median income of occupants of such units was approximately that of all households. KRIHS also found that the major beneficiaries of the public rental programs were highly educated, middle and lower-upper income households. Thus, the rental housing program did reach a somewhat lower income group than the house purchase portfolio, but below-median income households were served to only a limited extent.

40. In 1989, a program was launched by public institutions to build "permanent" rental units, that is, those which would remain on the market as rental units and not be available for purchase by the tenant. Approximately 100,000 such units had been built as of the end of 1990. NHF financing for such units totaled approximately W 343 billion.

41. Expansion of availability of Housing Finance. The total volume of lending for housing expanded greatly during the project period. At the end of 1985, the total balance of credit for housing sold at W 5400 billion, approximately 16% of deposit money banks' (commercial, local and specialized banks) portfolios; by the end of 1990, the volume of outstanding housing had nearly tripled, accounting for 21% of total loan portfolios and 9.4% of GNP. The ratio of housing loans to housing investment rose from 22.6% in 1985 to 41.7% in 1990.

42. However, the housing finance system retains many of the characteristics of a Government program. The sought after increase in the supply of private sector housing finance did not materialize and Government housing finance institutions therefore continue to retain a dominant position in the market. KHB and NHF still supply 86-87% of housing finance. Although deposit money banks were allowed to lend for housing in 1988, they contributed only 4.8% of the total balance of housing loans by the end of 1990.

43. Resource mobilization for both public and private housing finance programs continues to rely on a number of compulsory savings sources. Contractual savings schemes, which force households to supply low interest funds in return for the right to a future loan, continue to be a major source of funds. Between 1986 and 1990, 25% of NHF funds were mobilized through the National Housing Subscription Savings Deposit and over 30 percent through compulsory bond purchases. During the same period, KHB raised 30% of its resources through the Savings Deposits for Housing Purchase Program. Commercial banks also relied heavily on contractual savings schemes.

44. The heavy reliance on contractual savings schemes and tax-like obligatory bond sales is evidence of the slow pace of Korean financial sector liberalization and the housing finance system's limited participation in it. The continued control on short-term deposit rates limits the availability of funds and introduces credit rationing. Moreover, the rates charged on housing loans also continue to be controlled. While loan contracts are written so that rates could be adjusted, the lending rate for KHB loans has been held nearly constant at approximately 11.5% since 1984, although the inflation rate tripled from 2.5% to 8.6% from 1985 to 1990. Commercial bank rates are regulated and have been held at the rate on 1 year corporate bonds, thereby prohibiting rates which would reflect a reasonable term structure. Moreover, as long as lending rates remain controlled, banks are prevented from accessing other market-priced resources. As a consequence, restricting lending rates has effectively limited access to funds and the volume of housing finance available.

45. Impact on the Housing Sector. The impact of the expansion of the housing finance system on the sector is unclear. Increasing the provision of housing finance exerts its effects on the housing market primarily by increasing demand. However, severe restrictions on supply through restrictive housing sector policies (designed to reduce speculation) have limited the ability of the private sector to respond to the increased demand for urban housing. Development of new land for housing is strictly controlled in Korea and requires a long and involved approval process. Moreover, activities which might allow developers to use land already designated for housing in a more efficient manner, such as building higher density structures in the core of major cities, are subjected to a similarly strict set of redevelopment controls. Controls on the price of new

housing are applied only to multifamily structures and not to single family homes, thereby discouraging high density development. Thus, strict control on both the land used for housing and the ability of developers to substitute capital for land have restricted the ability of developers to respond to increases in the demand for housing. It will be of little use to expand the supply of housing finance if the supply of housing is constrained and cannot respond.

46. In such an environment, efforts such as those seen in Korea which attempt to improve housing conditions through a greater supply of housing finance may not be able to achieve their goals without other accompanying reforms. If housing prices are rising rapidly in comparison to income^{6/}, increasing the loan to value ratio or decreasing interest rates may have little impact: the total value of the loan can increase to the point where the borrower still finds that he must finance the same amount out of his/her own savings or pay the same monthly payment. Moreover, under such severe supply constraints, increasing the supply of housing finance may only exacerbate the problem. The rapid rate of urbanization and large increase in the demand for housing in Korea at the time of appraisal had already created a rapid rate of appreciation in land and housing prices. If more finance were available, the probable still greater increase in demand might have merely bid up the price of the existing housing stock to still higher levels. Thus, a housing finance reform program such as that pursued in this project must be accompanied or preceded by reforms of the housing supply system.

47. Some of constraints in the supply of housing were met by the large expansion of Government housing construction, which was supported by the Bank's Urban Land Project. Government efforts to expand the supply of housing had begun to show results by the end of the 1980s. Over the past five years, an average of 334,000 units were constructed annually as compared to the previous average annual production of 254,000 units. In 1990 alone, permits were issued for the construction of 500,000 units. The Government's success in increasing the stock of housing was reflected in a moderation of the inflation of housing prices, which continued to increase in real terms, but at a lower rate than in the previous 15 years. A high rate of wage growth has allowed the house price to income ratio to decline slightly, although not sufficiently to return to its level before the rapid appreciation of the 1970s. However, estimates show that the housing sector still suffers from excess demand and annual production is still far less than the 1 million units needed to meet existing and future demand.^{7/} Apparently, neither the threefold increase in the supply of housing finance nor the rapid expansion in Government land development activities^{8/} were sufficient solutions to the problems of the sector, although they did relieve some of the pressure.

48. However, a long-term solution can only come through broadening housing policy reform to those factors which restrict the supply of housing. While this

6/ The actual trend in the house price to income ratio or rent to income ratio is still not available for the project years.

7/ See "Korea: Housing Project," Staff Appraisal Report, 1991.

8/ See Project Completion Report, Urban Land Development Project.

project did not directly address these factors, it did contribute to the subsequent development of a Housing Sector Project (Loan 3329-KO) with a broader policy framework.

49. Economic Rate of Return. Estimates of the ex post rates of return on the project are actually higher than the ex ante estimates. The estimated return on the larger "Type A" units financed by the project increased from 17.5% to 20.0% while that of the smaller "Type B" unit increased from 12.2% to 13.8%. However, as noted in Annex I, returns have increased primarily due to increases in monthly rents. Since an increase in rents is indicative of continued pressure in the housing market, this result suggests real reform of the sector was not achieved by the end of the project. Nonetheless, the subsequent moderation in house price increases brought on by the Government's production program would be considered at least a short-term success.

Project Sustainability

50. Evaluating whether the benefits of the project are likely to continue must again reflect its dual nature as both an investment and a policy program. In the most narrow sense, the project's investment component is highly sustainable. The institution in question, NHF, is very strong financially and likely to continue to be a major source of housing finance. However, the sustainability of the improvements seen in housing sector conditions by the end of the 1980s is less clear. These improvements were achieved with a massive transfer of resources to the housing sector and it is unlikely that the Government can maintain this level of investment for a sufficient period to return conditions to their level at the start of the decade. Thus, the general approach of Korean housing sector policy may not be sustainable; a "sustainable" approach would rely on sectoral reforms which would allow housing supply to adjust to demand. Nonetheless, the willingness of local officials to meet the targets set forth in this loan suggests a growing recognition of the need for housing and financial sector reform. This result bodes well for the more ambitious program of housing reform set forth in Loan 3329-KO and the financial sector reform program contemplated under the proposed financial sector adjustment loan.

H. Borrower and Bank Performance

51. Relationships between Bank staff and Government officials was good throughout the project and the continuing dialogue on policy issues led to the next loan. All loan covenants for this project were complied with and timely reports were submitted. By the end of the original period allocated to the project, the policy objectives were met, and progress on these objectives continued even after the loan was completely disbursed.

52. Twenty-one weeks of staff time were employed in supervising the project, slightly less than the average for other projects in the sector in Korea.

Lessons Learned

53. The following lessons were learned under the project:

- (a) Design of sector project: Care should be taken not to define the "sector" so narrowly that although all policy objectives are met, the impact on the sector is minimal. In this case, the project's impact was limited by the pace and coverage of financial sector liberalization. While significant liberalization did occur in the financial sector, it did not extend to the issues (interest rate, term structure, etc.) most vital to the housing finance system. Thus, housing finance operations should always, to the extent possible, include representatives of the Ministry of Finance among the official "clients" and coordinate activities with Bank financial sector operations. In general, projects with a sectoral or policy focus should monitor policies in other relevant sectors.
- (b) Sequencing in Policy Reform Programs: Sectoral reform programs must examine not only the types of reform necessary in the economy, but also their order. In this case, attempting to expand the housing finance system without complementary reform of the policies effecting housing supply limited the success of the project. The importance of sequencing was particularly evident in the efforts to promote private commercial rental housing through expanded finance, which were almost totally unsuccessful in the absence of regulatory reform. Thus, the lack of accompanying reforms of regulations effecting the supply of housing mitigated the impact of increasing the supply of finance.^{2/}
- (c) Evaluation of Policy Reform Projects: Extreme care should be applied to the interpretation of the rates of return achieved in policy reform projects. For example, in this case, increases in housing prices elevated the rate of return on units financed by the project. Thus, a seemingly favorable result, a higher ex post rate of return, actually signified continued distortions in the housing sector. For this reason, project economic evaluations should include analysis of the factors contributing to the change in rate of return estimates and how these factors relate to the project's policy objectives.

^{2/} The subsequent Housing Sector Project, Loan 3329-KO, is addressing these regulatory issues.

Sources:

World Bank, "Korea: Housing Finance System," June 27, 1986

World Bank, "Korea: Housing Finance Sector Project," Staff Appraisal Report, May 26, 1987

Cho, Yoon-Je and Deena Khatkhate, "Lessons of Financial Liberalization in Asia: A Comparative Study," World Bank Discussion Paper No. 50, 1989

World Bank, "Korea: Country Economic Memorandum," October, 1989

Renaud, Bertrand, "Understanding the Collateral Qualities of Housing for Financial Development: The Korean 'Chonse' as Effective Response to Financial Sector Shortcomings," Infrastructure and Urban Development Department, INU Discussion Paper 49, The World Bank, June 1989

Kim, Kyung-Hwan, "Housing Prices, Affordability, and Government Policy in Korea," Asia Region Series Internal Discussion Paper, Report No. IDP 99, The World Bank, July 1991

Sekse, Rebecca, "Overview of the Financial Sector in Korea," The World Bank, 1992, processed.

World Bank, "Korea: Housing Sector Project," Staff Appraisal Report, May 3, 1991.

ECONOMIC RATE OF RETURN CALCULATIONS

1. Calculation of economic rates of return are somewhat problematic in sector lending programs. Even if funds are used to finance investments, as in the present case, the real purpose of the loan is to promote policy reform. Moreover, the importance of the rate of return is more difficult to interpret than in traditional investment programs. If an ex post rate in an investment project exceeds the ex ante rate, the program can unambiguously be judged a success. However, in a sector loan, such a result may denote a lack of real reform which allows price distortions and price increases to continue. These considerations are particularly important in an environment such as the Korean housing market, where supply restrictions have contributed to rapid inflation of housing prices and rents.

2. Calculation of ex ante rates of return. The original rate of return calculations used two stylized housing units which represented those financed in the NHF portfolio. The market value of the housing services provided by such units was compared with their initial construction costs. The market value of the housing services was estimated using the chonseil system as the best approximation of market price and calculated the interest income foregone by the tenant over a month as the estimate of monthly rent. The informal market or "curb" interest rate was used to represent "market" interest rates. The current monthly rent derived from these figures was extrapolated over a twenty year period, thereby implicitly assuming that the real value of rents would remain constant.

3. Ex post rate of return. This same methodology was replicated in calculating the ex post rate. Since the loan was largely disbursed in the first year, the original costs estimates were used.^{1/} The market value of the benefit provided by such units was calculated by inflating the original chonseil deposit by the country-wide chonseil price index and computing the actual monthly rent as the foregone interest at the current curb rate. Thus, estimates of monthly rent were computed for 1987 to mid-1991. Monthly rents computed in this fashion were deflated by the CPI to estimate real rents. The 1991 real rent estimate was again extrapolated so that the total rate of return would be calculated over twenty years. The data and estimates for these calculations are included in the attached table.

This methodology yielded the following results:

	<u>Type A</u>	<u>Type B</u>
Ex ante Rate	17.5	12.2
Ex Post Rate	20.0	13.8

1/ Since the loan financed NHF activities and not construction of designated units, actual cost estimates would have been impossible to obtain.

4. Comparison of Ex ante and Ex post rates. Since costs were assumed constant in the ex post calculations, only benefits contribute to the higher rate of return. Thus, the higher rate of return was due to the increase in the estimate of monthly rent throughout the project. Curb market interest rates were actually declining during this period, so the rate at which interest was foregone declined as well. Thus, the increase in the rate of return of the project is solely due to the appreciation in the level of chonseil deposits demanded of tenants.

5. Traditionally, such an increase in the rate of return would imply a successful project. However, the purpose of this project was to relieve the excess demand in the housing market through increased provision of housing finance. If housing prices, as estimated by chonseil, continue to increase and exceeded the original estimates, such a result was not achieved. Moreover, the fact that the rate of return rose despite a decline in interest rates implies that whatever benefits were achieved by financial sector reform, were overcome by the continuing problems of the housing sector.

6. Finally, it should be noted that calculating rates of return on a unit built in 1990 would yield somewhat different results. Building material and construction costs have increased rapidly in the last five years, and a rate of return calculated on such a unit would undoubtedly be lower. However, the units financed under this project would not have been directly effected by the increase in construction costs.

DATA FOR RATE OF RETURN CALCULATIONS								
YEAR	CHONSEI INDEX	ESTIMATE	ACTUAL	CURB INTEREST RATE		ESTIMATED MONTHLY RATE		CPI 1985=100
		TYPE A	TYPE B	ANNUAL	MONTHLY	TYPE A	TYPE B	
1986	100.0	10,864,000	6,419,000	23.1	1.75	217,280	128,380	102.8
1987	119.0	12,982,480	7,638,610	23.0	1.74	225,895	132,912	105.9
1988	135.3	14,698,992	8,684,907	22.7	1.72	252,822	149,380	113.5
1989	159.1	17,284,624	10,212,629	19.1	1.47	254,083	150,126	119.9
1990	135.6	20,163,584	11,913,664	18.7	1.44	290,355	171,557	133.3
mid-1991	193.6	21,030,618	12,427,184	18.6*	1.43	302,840	177,709	n.a.

KOREA

PROJECTED AND ACTUAL LENDING BY THE HOUSING FINANCE SYSTEM, 1986-90

Table 1: KOREA HOUSING BANK LOAN PORTFOLIO
End of Year Balance (billion Won)

<u>Year</u>	<u>Project*</u>	<u>Actual**</u>
1986	-	2,251 ***
1987	2,311.9	2,862
1988	2,727.8	3,290
1989	3,208.2	4,670
1990	3,762.5	6,169

* From Balance sheet, term portion of housing loans only

** Source: Korea Housing Bank, "Monthly Economic Review

*** 1986 total at appraisal was preliminary, hence slight discrepancy

Table 2: NATIONAL HOUSING FUND PORTFOLIO
End of year Balance (billion Won)

<u>Year</u>	<u>Projected*</u>	<u>Actual**</u>
1986	2,650	2,830***
1987	3,231	3,284
1988	3,803	3,806
1989	4,425	4,878
1990	6,170	7,075

* From appraisal balance sheet; operating assets plus current portion loans receivable; excludes rural and "other

** Source: Korea Housing Bank, "Monthly Economic Review" excludes rural, dormitory and "other"

*** 1986 balance at appraisal was preliminary, hence slight discrepancy with actual figure

PROJECT COMPLETION REPORT

KOREA

HOUSING FINANCE SECTOR PROJECT (LOAN 2853-KO)

PART II: PROJECT REVIEW FROM BORROWER'S PERSPECTIVE

The Borrower did not submit Part II of the report.

PROJECT COMPLETION REPORT

KOREA

HOUSING FINANCE SECTOR PROJECT (LOAN 2853-KO)

PART III - STATISTICAL INFORMATION

1. Related Bank Loans

Loan/Credit	Purpose	Year of Approval	Status	Comments
LN 1980-KO National Urban Land Development and Housing I	To provide housing for low-income families and to further develop the capabilities of the major public institutions serving the housing sector, namely Korea Land Development Corporation (KLDC) and Korea National Housing Corporation (KNHC). The objectives to be pursued in the context of an ongoing dialogue on housing policy issues between the Bank and the Korean Government was through the technical assistance and housing sector study.	04/30/81	Completed.	PCR No. 8689 of 05/23/90 and PPAR No. 9723 of 06/23/91 have been issued.
LN 2216-KO National Urban Land Development & Housing II	To advance the Bank/Government dialogue on sector policy and programs and thus (a) assist in rationalizing and strengthening the housing and land development institutions in the public sector; (b) support the development of the National Housing Fund (NHF) as a viable financial intermediary with capacity for project appraisal and supervision; and (c) support investments in the policies and programs for delivering housing to lower income families by financing the development of land and housing by KLDC and KNHC.	12/14/82	Completed.	PCR No. 8689 of 05/23/90 and PPAR No. 9723 of 06/23/91 have been issued.

LN 3329-KO Housing Sector	To support the government's housing sector strategy by providing resources through the National Housing Fund for lower-income housing and by assisting the government in formulating a framework for housing policy development and an agenda for policy reform in the sector. The government's housing policy objectives are to target public housing assistance in terms of the needs of the recipients and to minimize the cost of providing the assistance, while improving regulation of the sector in order to increase the efficiency of housing services.	05/23/91	Project being executed.	Project became effective 10/16/91.
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2. Project Timetable

ACTIVITY/EVENT	DATE PLANNED	DATE REVISED	DATE ACTUAL
Project Identification			May 1986
Preappraisal Mission			November 1986
Appraisal Mission	February 1987	March 1987	Feb. 16-28, 1987
Negotiations		April 27, 1987	Apr.30-May 5, 1987
Board Approval	June 1987	June 16, 1987	June 23, 1987
Loan Signing	June 1987		Aug. 6, 1987
Loan Effectiveness			Oct. 22, 1987
Completion Date	June 30, 1990		Nov. 22, 1989
Closing Date	June 30, 1991		Nov. 22, 1989
Final Disbursement			Nov. 22, 1989
Final Loan Account Closing			Dec. 4, 1989

3. Loan Disbursements

Cumulative Estimated and Actual Disbursements
(US\$ Million)

FY	Semester	Appraisal Estimate	Actual Amount	Actual as % of Appraisal	Actual as % of Loan
1988	12/31/87	20.0	60.26	301.30	40.2
	06/30/88	25.0	120.16	480.64	80.1
1989	12/31/88	39.0	135.16	346.56	90.1
	06/30/89	69.0	140.99	204.33	94.0
1990	12/31/89	100.5	150.00	149.25	100.0
	06/30/90	124.5			
1991	12/31/90	141.0			
	06/30/91	150.0			

Note: With the final disbursement on November 22, 1989, the loan account was closed, eighteen months prior to the original loan closing date of June 30, 1991. US\$ 149,986.50 were disbursed against sub-loans for civil work, i.e. 40% of the National Housing Fund's expenditures and US\$ 13,139.50 against Special account to reflect the currency exchange rate fluctuations.

4. Project Costs and Financing

a) Project Costs - Appraisal

Project Components	Local	Foreign	Total	Local	Foreign	Total
	-----	(Won Million)-----	-----	-----	(US\$ Million)-----	-----
NHF Housing Program:						
Rental Units	381,011	133,869	514,880	443.0	155.7	5987
Sale Units	536,732	188,512	725,244	624.1	219.2	8433
Training & Studies	258	172	430	0.3	0.2	05
TOTAL	<u>918,001</u>	<u>322,553</u>	<u>1,240,554*</u>	<u>1,067.4</u>	<u>375.1</u>	<u>1,4425</u>

b) Project Costs - Actual

Project Components	Local	Foreign	Total	Local	Foreign	Total
	-----	(Won Million)-----	-----	-----	(US\$ Million)-----	-----
NHF Housing Program:						
Rental Units	396,639	139,360	535,999**	536.0	188.3	7243
Sale Units	305,936	107,499	413,435**	413.4	145.3	5587
Training & Studies	264	175	439	0.4	0.2	06
TOTAL	<u>702,839</u>	<u>247,034</u>	<u>949,873</u>	<u>949.8</u>	<u>333.8</u>	<u>1,2836</u>

c) Project Financing - Appraisal vs. Actual

	-----Appraisal-----			Share	-----Actual-----			Share
	Local	Foreign	Total		Local	Foreign	Total	
		(US\$ Million)				(US\$ Million)		
Government	1,067.4	225.1	1,292.5	90%	949.8	183.8	1,133.6	88%
Bank Loan	0.0	150.0	150.0	10%	0.0	150.0	150.0	12%
TOTAL	<u>1,067.4</u>	<u>375.1</u>	<u>1,442.5</u>	<u>100%</u>	<u>949.8</u>	<u>333.8</u>	<u>1,283.6</u>	<u>100%</u>

* Plan 1987 and 1988

** Allocations during 1987 and 1988

Note: By end of 1989, allocations were 243,058 million won instead of original estimates for the 87-89 period.

8. Project Results

a) National Housing Fund - Balance Sheet as of December 31
(Won Million)

	1986	1987	1988	1989	1990	1991
CURRENT ASSETS	307,427	221,468	444,848	1,399,613	1,293,016	1,350,174
Time Deposits	26,000	30,000	201,000	796,983	250,000	120,000
Special Account	0	7	1	0	0	0
Current Loan	245,642	136,327	172,216	479,362	949,862	1,286,871
Accounts in KHB	150	7,981	20,873	45,362	(99,503)	(272,526)
Accrued Income	35,581	47,034	50,684	77,867	104,608	117,780
Unsettled Payment	54	119	74	39	88,049	98,049
Long-Term Loans	2,830,620	3,508,783	4,014,862	4,818,916	6,787,916	8,280,260
Investments	1,415	129	63	25	0	0
Other Receivables	31	1,590	244	118	0	0
Deferred Assets	5,109	3,406	1,703	0	0	0
ASSETS TOTAL	3,144,602	3,735,376	4,461,720	6,218,672	8,080,932	9,630,434
CURRENT LIABILITY	947,257	843,559	849,747	1,354,714	1,858,546	1,741,613
Accounts Payable	10,401	12,236	14,407	13,762	13,762	13,762
Unsettled Receipts	63	121	476	530	530	530
Subscription Deposit	137,162	114,069	164,866	118,714	287,786	501,836
Public Org. Deposits	101,900	39,000	34,757	37,435	7,462	28,674
Accrued Expenses	52,597	43,966	51,172	96,034	96,034	96,034
Revenue Received Advance	4,454	7,858	5,168	6,052	6,052	6,052
Income Taxes Payable	167	163	244	201	201	201
Credit Control Fund	248,960	270,518	254,130	330,192	712,192	666,991
Type-1 Bond	233,660	299,519	285,736	299,021	283,922	334,128
Fund Bond	167	0	0	300,000	0	0
Construction Loan	0	156	8	0	0	0
IBRD Loans	6,614	7,384	5,929	5,695	15,000	15,000
MOF Loans	0	0	0	20,994	357,200	0
Liability Allow.-Type 1 Bond	151,112	48,390	32,838	27,408	78,400	78,400
Liability Allow.-Fund Bond	0	0	0	98,671	0	0
Income Received	0	179	16	5	5	5
FIXED LIABILITIES	1,919,569	2,337,995	2,907,970	3,973,887	5,234,166	6,743,480
Subscription Deposit	232,351	130,282	242,796	982,575	1,659,403	2,170,412
Type-1 Bond	1,114,882	1,193,899	1,422,103	1,768,122	2,333,812	2,925,276
Type-2 Bond	317,636	332,999	370,414	459,706	770,706	1,097,256
Fund Bond	0	300,000	300,000	0	0	0
Construction Loan	163	8	0	0	0	0
IBRD Loans	58,363	121,227	141,034	140,157	124,852	135,398
MOF Loans	0	0	130,000	339,006	0	0
Public Org. Deposits	63,757	72,192	44,897	36,136	61,627	32,953
Liability Allow.-Type 1 Bond	113,305	138,777	159,115	194,386	209,517	279,917
Liability Allow.-Type 2 Bond	19,112	29,371	40,878	53,799	74,249	102,268
Liability Allow.-Fund Bond	0	19,240	56,733	0	0	0
DEFERRED LIABILITIES	0	0	24,682	18,511	12,341	6,170
LIABILITY TOTAL	2,866,826	3,181,554	3,782,399	5,347,112	7,105,053	8,491,263
EQUITY TOTAL	277,775	430,823	556,321	748,559	975,878	1,139,171
Govt. Contributions	183,000	283,000	313,000	343,000	343,000	343,000
Nat'l Housing Lottery Fund	81,542	92,844	104,052	134,710	169,710	204,710
Retained Earning - Beginning	(18,168)	13,232	54,977	139,269	270,845	463,168
Adjusted Balance	(83)	(159)	(21)	(83)	0	0
Net Income	31,484	41,906	84,313	131,663	192,323	128,293
TOTAL LIABILITIES & EQUITY	3,144,601	3,612,377	4,338,720	6,095,671	8,080,931	9,630,434
Current Ratio	32.5%	26.3%	52.4%	103.3%	69.6%	77.5%
Equity Ratio	8.8%	11.5%	12.5%	12.0%	12.1%	11.8%
Debt Ratio	91.2%	85.2%	84.8%	86.0%	87.9%	88.2%
Debt Equity Ratio	1032.1%	738.5%	679.9%	714.3%	728.1%	745.4%

5. Project Results

b) National Housing Fund - Income Statement
For the 12 Months Ended December 31
(Won Million)

	1986	1987	1988	1989	1990	1991
TOTAL OPERATING INCOME	247,140	276,632	318,962	423,641	583,198	575,752
(Interest Income)						
Time Deposits	5,910	1,295	7,764	67,309	104,698	37,000
Special Account	127	37	64	3	0	0
Other Deposits	0	1	1	1	0	0
Loans	241,018	274,995	310,977	356,182	478,500	538,752
KHB Account	81	298	142	141	0	0
Miscellaneous	4	6	14	5	0	0
TOTAL OPERATING EXPENSE	161,620	173,240	184,231	246,041	328,218	372,145
(Interest Expense)						
Subscription Deposits	33,177	25,091	24,446	56,380	113,674	162,328
Type-1 Bond	108,012	96,729	87,559	100,628	126,491	146,928
Type-2 Bond	8,192	10,273	11,539	13,021	20,301	28,019
Fund Bond	0	19,241	37,493	41,937	20,100	0
National Fund Borrowing	28	17	7	0	0	0
IBRD Loans	5,085	6,416	10,527	10,170	9,999	10,158
MOF Loans	0	0	2,568	16,239	30,688	18,176
Public Org. Deposits	6,998	13,630	9,915	7,615	6,965	6,536
Commitment Charges	128	1,843	177	51	0	0
GROSS PROFIT	85,520	103,392	134,731	177,600	254,980	203,607
ADMINISTRATION FEE EXPENSE	43,903	45,537	52,567	51,942	56,114	66,372
OPERATING PROFIT	41,617	57,855	82,164	125,658	198,866	137,235
NON-OPERATING INCOME	455	514	703	619	0	0
Miscellaneous	455	514	703	619	0	0
TOTAL NON-OPERATING EXPENSE	10,588	16,507	(1,258)	(5,369)	6,543	8,942
Housing Gurantee Fund	0	0	3,739	4,404	6,247	8,542
Consultant Fee	30	113	258	125	100	200
Overseas Training	75	8	61	93	196	200
Foreign Exchange Loss	8,781	14,684	61	0	0	0
Foreign Exchange Adjustment	1,702	1,702	(5,377)	(9,991)	0	0
REAL ESTATE DISPOSAL	0	44	188	17	0	0
NET INCOME	31,484	41,906	84,313	131,663	192,323	128,293
=====	=====	=====	=====	=====	=====	=====

5. Project Results

c) Studies

1. Optimum Allocation of Housing Finance: The study explored measures to improve fund mobilization and development of new lending programs. The study originally planned to be completed in December 1988 was completed in February 1989. The results of the study have proceeded more slowly than anticipated, in part due to the economic slowdown of 1989/90. Thus some types of direct controls have not been relaxed. However, the rules for lending to housing constructors were liberalized in terms of the maximum loan amounts, the share of costs which could be financed and timing of loan withdrawals. The requirements regarding participation in savings schemes were also relaxed allowing more borrowers to be eligible for larger loans. A graduated payment system was also offered at KHB and lending procedures in general were simplified. KHB further expanded its home financing services by establishing a Credit Guarantee Fund at the beginning of 1988. The objective of this Fund was to provide insurance to lenders for certain types of clients without conventional or sufficient collateral. This program is targeted to lower income households and employers providing housing to their workers. The limits of the guarantee are quite modest (W 30 million for house purchase), but the broader impact on lender's willingness to service these types of clients may be important in expanding mortgage services. KHB also increased the age of houses it was willing to finance from 5 to 10 years, considerably enlarging the stock of reasonably priced housing for which KHB mortgages were available.

2. Evaluation of Public Sector Housing Program: The study evaluated public housing programs with special emphasis on housing finance aspects. The results of the study turned out to be more preliminary and more narrowly focused than envisaged at the time of appraisal. The analysis and recommendations contained in the study did not complete the analysis as originally envisaged. The methodology of describing the outputs of public programs and regulations as comparable monetarized factors turned out to require several preparatory or development steps in advance of the detailed analysis. The study laid some of the groundwork for subsequent analysis by carefully describing each of the public sector programs and by measuring the main characteristics of each. The result is a detailed description of public housing programs but not the type of quantitative analysis which could be directly used to adjust policies and programs.

6. Status of Major Covenants

Section	Subject	Status
2.02 (b)	Borrower to open and maintain in dollars a special account in the Korea Exchange Bank on terms and conditions satisfactory to the Bank	Complied with.
3.03	Borrower to approve the Sub-projects, and make sub-loans through NHF, in accordance with criteria agreed with the Bank.	Complied with.
3.04	Borrower to review annually with the Bank the progress achieved in the implementation of the Policy Statement. The first such review to take place not later than 06/30/88.	Complied with.
3.05	Borrower to furnish to the Bank, for the Bank's review and comments, any proposed changes to the Policy Statement.	No changes to date.
3.06	The Borrower to furnish to the Bank, not later than 12/31/88, the results of each of the studies under Part B.1. of the Project, for the Bank's review and comments.	Complied with. Two studies: (a) Optimum Allocation of Housing Finance; and (b) Evaluation of Public Sector Housing Program were completed February 1989.
4.01	The Borrower to have the records and accounts, including those for the Special Account and Statements of Expenditures to be maintained and audited and furnish to the Bank audit report, nine months after the end of each fiscal year.	Complied with. Ministry of Construction (MOC) maintained records and Audited accounts were submitted on time.
Schedule 1, 1.	Loan amount to meet 40% of NHF expenditures for civil works contracts of each sub-loan.	Complied with. A total of US\$ 149,986,860.50 was disbursed against civil works.
Schedule 1, 2.	No withdrawals to be made for expenditures for civil works contracts costing less than US\$500,000.	No such case found.

7. Use of Bank Resources

a) Bank Staff/Consultant Inputs
(Staff weeks)

PROJECT CYCLE	BANK FISCAL YEAR									
	FY84	FY85	FY86	FY87	FY88	FY89	FY90	FY91	FY92	TOTAL
Preparation	.1		1.8	40.3						42.2
Appraisal				5.8						5.8
Negotiations				11.9						11.9
Loan Processing	.4		.1	20.0						20.5
Supervision					5.5	8.3	7.1	.1		21.0
Project Completion								4.7	10.4	15.1
TOTALS	.5		2.0	78.0	5.5	8.3	7.1	4.8	10.4	116.5

7. Use of Bank Resources

b) Bank Missions

TYPE OF MISSION	TERMS OF REFERENCE	DATES	STAFF	PERFORMANCE RATINGS	MISSION REPORTS
Identification	04/28/86	05/86	Sr. Economist	---	---
Preparation 1	06/13/86	06/20-24/86	Loan Officer Housing Advisor	---	08/07/86
Preparation 2	---	09/86	Sr. Economist	---	---
Preappraisal	11/20/86	11/24-12/10/86	Sr. Economist Financial Analyst Housing Advisor Economist Economist Economist (c)	---	12/29/86
Appraisal	02/12/87	02/16-28/87	Sr. Economist Financial Analyst	---	Yellow cover 03/20/87
Post Appraisal	06/11/87	06/15-21/87	Sr. Economist Economist	---	---
Supervision 1	01/25/88	02/88	Sr. Economist Economist	1	04/25/88
Supervision 2	04/25/88	05/07-19/88	Sr. Economist Economist	1	07/07/88
Supervision 3	---	05/25-27/88	Housing Advisor	---	05/27/88
Supervision 4	08/03/88	08/07-14/88	Sr. Economist Economist Economist (c)	---	---
Supervision 5	01/10/89	01/29-02/02/89	Sr. Economist	---	03/07/89
Supervision 6	07/07/89	07/16-26/89	Sr. Economist	1	08/25/89
Supervision 7	02/19/90	02/19-03/01/90	Sr. Economist	1	04/27/90
Supervision 8	05/02/90	05/90	Sr. Economist	---	06/18/90
Supervision 9	09/07/90	09/90	Sr. Economist	---	11/05/90